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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/624,799	07/22/2003	Francis P. Morana	18034 (AT 20958-02110)	7466

7590 11/17/2004

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EXAMINER

DINH, PHUONG K

ART UNIT	PAPER NUMBER
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2839

DATE MAILED: 11/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/624,799	Applicant(s) MORANA ET AL.	
	Examiner Phuong KT Dinh	Art Unit 2839	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8-20 is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 5-7 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 1-7, 9, 15-20 are objected to because of the following informalities:
2. Claim 3, line 2, "a pin" should be changed to - - the pin - -.
3. Claim 3, line 3, "said first and second distal end portions" have no antecedence basis.
4. Claim 9, line 2, "a first contact beam and a second contact beam" should be changed to - - the first contact beam and the second contact beam - -.
5. Claim 15, line 7, "said distal end portions" has no antecedence basis.
6. Claim 16, line 3, "a pin" should be changed to - - the pin - -.
7. Claim 17, "said first and second contacts" have no antecedence basis.
8. Claim 19, line 2, "said first and second contacts" have no antecedence basis.
9. Claim 20, line 2, "a longitudinal axis" should be changed to - - the longitudinal axis - -.
10. Claim 20, line 4, "said first and second contacts" have no antecedence basis.
11. Appropriate correction is required.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2, 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fedder (U. S. Patent 4,975,069) in view of Youngfleish (U. S. Patent 5,224,885).

13. Regarding claims 1, 2, 4 and 6, Fedder discloses a housing 12 and at least one contact situated within the housing, the contact comprising a round spring portion 38 having a first and a second ends and a first contact beam and a second contact beam extending from the respective first and second ends of the round spring portion, the round spring portion joining the first contact and second contact beams, the first and second contact beams having substantially parallel distal end portions, at least one of the first end portion comprising an upstanding guide surface 52 configured to receive and align a connection pin between the distal end portions. Fedder discloses the claimed invention except for a lower profile contact. Youngfleish discloses a lower profile contact. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Fedder to provide the lower profile contact so as to provide small size connector.

Regarding claim 5, Fedder and Youngfleish disclose the claimed invention except for at least one of said first and second contact beams adapted to communicate with a solder ball. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use solder balls so as to provide reliable strong connector.

Regarding claim 7, Fedder and Youngfleish disclose the claimed invention except for said profile dimension being less than about 2mm between said tip and said

lower edge. It would have been obvious to one of ordinary skill in the art at the time the invention was made the profile dimension being less than about 2mm between the tip and the lower edge, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

Allowable Subject Matter

14. Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

15. Claims 8-20 are allowed.

16. The following is an examiner's statement of reasons for allowance:

17. None of the reference discloses the first and second contacts arranged inversely to one another such that the spring portions of each of the first and second contacts are oriented toward one another in a nested configuration. The first and second contact beams along an insertion axis substantially perpendicular to the longitudinal axis.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuong KT Dinh whose telephone number is 571-272-2090. The examiner can normally be reached on 8 -5, 5 days a week.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, TC Patel can be reached on 571-272-2098. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Phuong Dinh', is written over the printed name.

Phuong Dinh
November 10, 2004.